

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF NEW YORK

ADVANCED FIBER TECHNOLOGIES
TRUST,

Plaintiff,

-against-

1:07-CV-1191 (LEK/DRH)

J&L FIBER SERVICES, INC.,

Defendant.

MEMORANDUM-DECISION AND ORDER¹

Plaintiff Advanced Fiber Technologies Trust (“AFT”), a trust organized under the laws of Canada with a principal place of business in Quebec, Canada, brought this action for patent infringement arising under 35 U.S.C. § 271, *et seq.* against Defendant J&L Fiber Services, Inc. (“J&L”), a Wisconsin corporation, on November 9, 2007. Compl. (Dkt. No. 1). Jurisdiction is predicated on 28 U.S.C. § 1331 and 28 U.S.C. § 1338(a).

AFT alleges that J&L’s V-Max screen cylinder infringes upon a patent owned by AFT. See generally Dkt. No. 1. AFT seeks a preliminary and permanent injunction against J&L preventing J&L from further infringement; a finding of such infringement by J&L; damages, treble damages, costs, and attorneys fees; and the recall and destruction of all materials within the control of J&L that infringe on Plaintiff’s patent. Compl.

On February 22, 2008, J&L filed its Answer and counterclaim, denying any alleged infringement; contending that the patent is invalid and unenforceable; asserting that Plaintiff’s claims are barred; and requesting declaratory judgment as to the reissued patent’s invalidity. Dkt.

¹For printed publication in the Federal Reporter

No. 12. Presently before the Court are J&L's Motion for the construction of claim terms (Dkt. No. 45) ("Construction Motion") and Motion for summary judgment (Dkt. No. 50) ("J&L's Summary Judgment Motion"), and AFT's Motion for summary judgment as to infringement (Dkt. No. 33) ("Infringement Motion") and Motion for summary judgment as to validity (Dkt. No. 51) ("Validity Motion").

I. BACKGROUND

The instant action involves two patents owned by AFT that are directed to "screen plates, *e.g.*, screen cylinders and flat screen plates, for use, for example, in the pulp and paper industry for screening pulps and to methods for their manufacture." Dkt. Nos. 1, Ex. A; 45, Ex. A. The screen plate was originally described in U.S. Patent No. 5,200,072 ("'072 patent"), see Dkt. No. 1, Ex. A, which issued April 6, 1993 based upon an application filed August 16, 1990.² AFT SMF Resp. (Dkt. No. 75-2) ¶ 10. AFT purchased the '072 patent in March 2002 from a predecessor in interest, CAE ScreenPlates, Inc. J&L SMF. Resp. (Dkt. No. 39-11) ¶ 13. On September 12, 2003, AFT applied to the Patent Office to reissue the '072 patent. AFT SMF Resp. (Dkt. No. 75-2) ¶ 49. AFT's application included a declaration placing January 1990 as the earliest provable date of invention. *Id.* ¶ 50. On January 5, 2006, the Patent Office rejected all of the claims, citing Gillespie (U.S. Patent No. 4,276,265) ("Gillespie")³ as a basis for the rejection. *Id.* ¶ 51. AFT responded to

² The '072 patent recites 23 claims: independent (device) claim 1, upon which claims 2-9 depend; independent (device) claim 10, upon which claims 11-17 depend; and independent (method) claim 18, upon which claims 19-23 depend. Dkt. No. 1, Ex. A.

³ Gillespie describes a screen cylinder comprising, *inter alia*, a generally cylindrical screening medium and a generally cylindrical structural backing plate lying concentrically such that the backing plate supports the screening medium. The Gillespie is not directed to pulp fiber sorting.

the rejection on May 5, 2006, emphasizing the scope of the applied for patent differed from the Gillespie and restating/clarifying the meaning of certain claim terms in their proposed reissue by way of reference to the Handbook of Pulp and Paper Technology. Id. ¶ 52. On December 18, 2007, the patent was reissued as U.S. Patent No. RE 39,940 (“‘940 patent” or “reissue”), see Dkt. No. 45, Ex. A.⁴ Id. ¶ II.12. On November 9, 2007, shortly after being informed that a reissue was imminent, AFT filed the instant action. Compl.

As early as February 2000, J&L has had knowledge of claims that its V-Max screen cylinder (“V-Max”), which is used to screen pulp for the production of paper, infringes upon the ‘072 patent; it was initially informed of this alleged infringement by CAE ScreenPlates, Inc. AFT SMF Resp. (Dkt. No. 75-2) ¶ 40. J&L promptly responded on February 23, 200, stating it would investigate the matter. Ultimately, J&L did not alter its product or methods, allegedly because, after thorough investigation, it believed that the ‘072 patent was invalid and that the V-Max did not, anyhow, infringe on that patent. J&L informed CAE of these beliefs by letter dated December 20, 2001. Id. ¶¶ 41-42. Subsequent to its purchase of the ‘072 patent, AFT filed several additional notices of infringement with J&L, which again denied the patent’s validity or the V-Max’s infringement of the patent, and allegedly provided what it claimed to be prior art references in support of its position. Id. ¶¶ 43-45. The dispute culminated with the instant infringement action brought on November 9, 2007, under 35 U.S.C. § 271. Compl. In its Answer and Counterclaim, filed February 22, 2008, J&L denies any infringement and asserts that, at any rate, the ‘072 patent and ‘940 reissue

See O’Brien Decl., Ex. B, Part 25 (Dkt. No. 60-5) at 16.

⁴ The ‘940 patent recites each of the 23 claims contained in the ‘072 patent, with certain changes, as well as an additional sixteen dependent claims, including: claims 24-31, and 37, which depend on claim 1; and claims 32-36, and 39, which depend on claim 10. Dkt. No. 45-4.

(collectively, “the ‘940 patent”) are invalid and/or unenforceable. Dkt. No. 12, ¶¶ 23-25, see also J&L SMF. Resp. (Dkt. No. 39-11) ¶ 13.

In or around April 2008, AFT served its first set of interrogatories on J&L seeking the legal and factual basis for J&L’s claims of non-infringement and invalidity, to which J&L responded with preliminary claim charts. See Mesiti Decl. (Dkt. No. 33-12) ¶ 6-7; see also Dkt. No. 60 at 3-4. On March 13, 2009, AFT filed a Motion for summary judgement on the issue of infringement. Dkt. No. 33. Discovery closed August 1, 2009. On September 30, 2009, J&L filed its Motion for the construction of claim terms. Dkt. No. 45. On October 1, 2009, J&L filed its own Motion for summary judgment. Dkt. No. 50. On the same day, AFT filed a Motion for summary judgment on the issue of validity. Dkt. No. 51.

II. CONSTRUCTION OF CLAIM TERMS

A. The Court Shall Construe all Disputed Terms Identified to Date

AFT asks the Court to prohibit J&L from contesting the meaning of terms not previously identified by J&L in answers to interrogatories served upon it by AFT. AFT argues that J&L’s construction request should be denied as untimely and that all disputed terms should have been identified during discovery. See Mem. in Opp’n to Construction Mot. (Dkt. No. 60) (“Opp’n Construction Mot.”) at 6-7. J&L counters that the disputed meaning of terms became apparent only after the close of discovery; J&L further contends that the sources underpinning its proposed constructions of disputed terms are objective, non-testimonial sources, and AFT suffers no prejudice from their being raised at this date. Reply Mem. in Supp. Construction Mot. (Dkt. No. 84) at 1.

AFT served interrogatories on J&L asking the latter for the basis of its invalidity and non-

infringement arguments, including its proposed claim constructions, see O’Brien Decl., Ex. C (Dkt. No. 60-7) ¶¶ 5-6, 11. J&L admits it failed to do so. J&L’s failure, however, is not unusual, and it does not present a sufficient basis for estopping J&L from seeking judicial construction of disputed terms identified after the discovery period closed. See SanDisk Corp. v. Memorex Products, Inc., 415 F.3d 1278, 1291-92 (Fed. Cir. 2005); Gillette Co. v. Energizer Holdings, Inc., 405 F.3d 1367, 1375 (Fed. Cir. 2005). Further, as discussed below, J&L bases its proposed constructions either on 1) the ordinary meaning of claim terms, as evidenced in objective sources that are widely known and available; or 2) the intrinsic evidence of the ‘940 patent, again publicly available, and most easily accessed by AFT. Thus, AFT suffers no significant prejudice as a result of J&L’s failure to update its responses to AFT’s interrogatories. SanDisk, 415 F.3d at 1290-92. Finally, AFT has itself recently identified disputed terms. See July 22, 2010 Claim Construction Hearing Transcript (Dkt. No. 106) (“Tr.”) 48-49; 53-56. In these circumstances, the Court finds it appropriate to construe all the disputed terms identified to date.

B. Claim Construction Analysis

The interpretation or construction of patent claims is a matter of law reserved for the courts. Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996). Courts are thus tasked with determining the meaning of terse or unfamiliar words used in a patent claim, while not changing or expanding the scope of the claimed invention. Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001). In construing patent claims, courts are generally to give the terms and phrases being interpreted “their ordinary and customary meaning,” Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996), as understood from the perspective of “a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent

application.” Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005). There are exceptions to this general rule, as an inventor may “choose[] to be his own lexicographer and give terms uncommon meanings,” Intellicall, Inc., v. Phonometrics, Inc., 952 F.2d 1384, 1387-88 (Fed. Cir. 1992); however, “this must be done with reasonable clarity, deliberateness, and precision” or the ordinary meaning of terms will control. In Re Paulsen, 30 F.3d 1475, 1580 (Fed. Cir. 1994).

Courts are to interpret claim terms primarily based on intrinsic evidence, namely, 1) the language of the claims themselves; 2) the patent’s specification; and 3) the prosecution history of the patent. Vitronics, 90 F.3d at 1582; Markman v. Westview Instruments, Inc., 52 F.3d 967, 979-980 (Fed. Cir. 1995). This intrinsic record “usually provides the technological and temporal context to enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of the invention.” V-Formation, Inc. v. Benetton Group SpA, 401 F.3d 1307, 1310 (Fed. Cir. 2005) (citations omitted). At times, however, courts may appropriately consider extrinsic evidence such as dictionaries or expert testimony.⁵ Markman, 52 F.3d at 980. Such evidence may help illuminate the meaning of terms within a relevant art, but it is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004), (quoting Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n, 366 F.3d 1311, 1318 (Fed. Cir. 2004)).

A court properly construes patent claims by looking first to the actual words used in the claims, as these define the scope of the invention, and gives those words their ordinary meaning in the relevant art. See Bell Commc’ns Research, Inc. v. Vitalink Commc’n Corp., 55 F.3d 615, 619-

⁵ Where dictionaries are consulted, technical dictionaries are generally preferable to general use dictionaries. See Phillips, 415 F.3d at 1318, 1321-22. This preference may be less pronounced where the disputed term carries no specialized meaning in the relevant art.

20 (Fed. Cir. 1995). Next, a court looks to the context provided by the patent specification, which is perhaps the most probative source for determining the scope of the patent and hence, the meaning of the claim terms. See 35 U.S.C. § 112; Phillips, 415 F.3d at 1315-17; Networld, LLC v. Centraal Corp., 242 F.3d 1347, 1352 (“The claims are directed to the invention that is described in the specification; they do not have meaning removed from the context from which they arose.”); Vitronics, 90 F.3d at 1582 (the specification usually is dispositive of a term’s meaning as it provides the “single best guide” to that meaning). Despite the usefulness of the specification in construction, a claim term should not be limited to only those embodiments described therein. Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906-909 (Fed. Cir. 2004).

A court should next consider the prosecution history, as this “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Phillips, 415 F.3d at 1317 (citing Vitronics, 90 F.3d at 1582-83). In the case of a reissue of a patent, the prosecution history includes both the original and subsequent reissue prosecution. See Spectrum Intern, Inc. v. Sterilite Corp., 164 F.3d 1372, 1378-79 (Fed. Cir. 1998). Courts must be caution in using the prosecution history as an aid to claim construction, as that history “cannot be used to limit the scope of a claim unless the applicant took a position before the PTO that would lead a competitor to believe that the applicant had disavowed coverage of the relevant subject matter.” Schwing GmbH v. Putzmeister Aktiengesellschaft, 305 F.3d 1318, 1324 (Fed. Cir. 2002); see also York Prods., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1575-76 (Fed. Cir. 1996) (“a patent applicant only limits claims during prosecution by clearly disavowing claim coverage.”); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed.

Cir. 2002) (“claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from . . . [that] meaning . . . by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”); Omega Eng’g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324-25 (Fed. Cir. 2003) (prosecution disclaimer attaches only where the allegedly disavowing statements made during prosecution are both clear and unambiguous). Finally, a court may consider extrinsic evidence to determine the meaning a person of ordinary skill in the art would attribute to a disputed term. Phillips, 415 F.3d at 1318-19; but see Vitronics, 90 F.3d at 1584 (extrinsic evidence cannot support a construction contrary to that mandated by intrinsic evidence); Markman, 52 F.3d at 983.

C. The Disputed Terms

During the course of discovery the parties identified two terms that require construction, “backing plate” and “screening medium.” See Dkt. No. 33. J&L’s Construction Motion additionally asks for judicial construction of the preamble to claim 18, and seven terms: “screen plate,” “means for releasably connecting,” shrink fit,” “rivets,” “adhesives,” “slots” and “openings.” Dkt. No. 45. AFT subsequently requested judicial construction of “perforation” and “engagement with.” Tr. (Dkt. No. 106) at 48-49; 53-56. The Court shall now turn to these terms.

1. “Screen Plate” is an Assembly of a Screening Medium and a Backing Plate

The Court shall first construe “screen plate,” which is found in independent claim 10, and dependent claims 11, 13-17, 32-36, 39.⁶ J&L proposes that the term “screen plate” (as well as

⁶ A claim in dependent form incorporates by reference all limitations of the claim to which it refers but must recite a further limitation of the subject matter claimed. 35 U.S.C. § 112.

“screen cylinder,” which it asserts is synonymous within the patent) should be construed to mean “an assembly of a screening medium and a backing plate.” J&L’s Mem. in Supp. of Mot. for Claim Construction (Dkt. No. 45-2) (“J&L’s Construction Mem.”) at 21. AFT proposes that “screen plate” should be construed to mean “a perforated plate utilized on many designs of pulp screening equipment that impedes pulp flow and is instrumental in causing a separation between suspended particles on the basis of their size, shape, and/or flexibility.” Opp’n Construction Mot. at 11. AFT, moreover, seeks to construe “screen plate” as synonymous with “screening plate” and “screen cylinder” as synonymous with “screening cylinder.” Tr. (Dkt. No. 106) at 49. As to this term, the Court adopts J&L’s construction, which is consistent with the claim terms and specification of the ‘940 patent and has not been disavowed; additionally, the Court rejects AFT’s contention that “screen plate” and “screening plate” are synonymous terms and adopts J&L’s construction which equates “screening plate” with “screening medium,” see Tr. (Dkt. No. 106) at 21.

a. A “Screen Plate” is an Assembly

The claims and specification leave no uncertainty that the term “screen plate” describes an assembly comprising a “screening medium” and a “backing plate.” Any construction that does not include this essential feature is contrary to the intrinsic evidence and must be rejected.

Claim 10 describes “[a] screen plate . . . comprising: a screening medium . . . *and* a structural backing plate” ‘940 patent, col. 14, Lns. 13-19 (emphasis in original). The specification also requires a construction of “screen plate” that defines this term by reference to its assemblage character: “Screen plate **10** may be formed as a flat screen plate or a screen cylinder as illustrated and is comprised of two different layers, namely a screening layer/plate **12** and a backing layer plate **14**.” Id., Col. 7, Lns. 61-64. Each preferred embodiment of the present invention

similarly notes the “screen plate” as comprising a screening medium and a backing plate. Finally, the specification explicitly identifies “the present invention” as “formed of two separate layers. The first layer comprises a screening plate . . . and the second layer comprises a backing plate.” *Id.*, Col. 2, Lns. 22-25.

The consistent description of “the present invention” as a screen plate comprising two layers, a screening layer and a backing plate makes clear that a “screen plate” must have these two layers. See, e.g., *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) (construing term to include feature characterized as “the present invention”); *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (construing claim term to include a fuel filter because of multiple mentions in the written description of a fuel filter as “the present invention”). AFT’s proposed construction leaves out this essential feature, focusing instead upon factors such as the type of equipment in which “screen plates” are used and the role they play in that equipment. AFT’s construction does not comport with the intrinsic evidence. Thus, a “screen plate” is an assembly of a screening medium and a backing plate.

b. “Screen Plate” and “Screening Plate” are not Synonymous

The Court rejects AFT’s assertion that the terms “screen plate” and “screening plate” are synonymous. Tr. (Dkt. No. 106) at 49. AFT’s position is inconsistent with the language of the claims themselves and is contrary to the specification. The claims and specification require construing “screening plate” and “screening medium” as equivalents, and as a component part of a “screen plate.”

The claim terms indicate that a “screen plate” (used in claim 10 and its dependent claims) is not equivalent to a “screening plate” (used in claim 18 and its dependent claims). Claim 10

describes a “screen plate . . . comprising: a screening medium . . . *and* a structural backing plate” ‘940 patent, Col. 14, Lns. 13-19 (emphasis in original). Claim 18 describes “a method of manufacturing a screen . . . said screen being formed of a screening plate and a backing plate” *Id.*, Col. 15, Lns.13-15. To construe the terms consistently, the “screen plate” referred to in claim 10 must be equivalent to the “screen” that is the object of the method of manufacture described in claim 18. Claim 10’s “screen plate” cannot be synonymous with claim 18’s “screening plate,” as this would mean that claim 18 describes a method of manufacturing a screen comprising a screening medium, a structural backing plate, and a backing plate. To avoid that construction, the Court finds that “screening plate” is not equivalent to “screen plate” but is equivalent to “screening medium.”

The correctness of this construction is confirmed by reference to the specification and extrinsic evidence. Contrary to AFT’s assertion that “screen plate” and “screening plate” are synonymous, the specification notes repeatedly that “according to the present invention, there is provided a method of manufacturing a screening plate *for use in* a screen plate . . . the screen plate being formed of a screening plate and a backing plate.” See, e.g., id., Col. 6, Lns. 12-14, 24-26 (emphasis added). A “screening plate” is clearly a component part that, along with a backing plate, comprise a “screen plate.” The term “screening plate” serves the same role and should be construed to describe the same object denoted by the term “screening medium” in the apparatus claims and described in the specification’s preferred embodiments. See, e.g., id., Col. 5, Lns. 42-50; 58-65.

Plaintiff’s own description of the ‘940 patent confirms this construction. In his Declaration, Robert Gooding, AFT’s Vice President, states that the patent “is directed to screen plates and screen cylinders.” Gooding Decl. (Dkt. No. 33-2) ¶ 8. AFT asserts that screen cylinders are a particular (cylindrically curved) type of the broader category of screen plates. See AFT’s Mem. in Opp’n to

J&L’s Post-Claim Construction Hearing Brief (Dkt. No. 113) (“AFT’s Post-Hearing Brief”) at 18. Gooding states that the patent includes a screen cylinder, a type of screen plate, “formed of at least two pieces: a screening plate . . . and a backing plate.” Gooding Decl. (Dkt. No. 33-2) ¶ 16. This description dovetails with claim 1, which claims a “screen cylinder comprising: a generally cylindrical *screening medium* . . . [and] backing plate.” (Emphasis added). Gooding, in describing depictions of the ‘940 patent, refers to “screening medium” and “screening plate” as denoted by the same reference number (12). *Id.* ¶ 17. Finally, AFT’s Opposition to J&L’s Construction Motion acknowledges that “the recited claims provide additional structure for a ‘screen plate.’” Dkt. No. 60 at 11. Based on the foregoing, the inescapable construction of “*screen plate*” as well as “*screen cylinder*” as used in the ‘940 patent is an assembly comprising a “*screening medium*,” also referred to as a “*screening plate*” and a *backing plate*.

2. “Screening Medium” means a Perforated Barrier through which Stock is Passed to Remove Oversized, Troublesome, and Unwanted Particles from Good Fiber

The term “screening medium” appears in claims 1, 2-8, 10, 11, 13-16, 27-32, 36-37, and 39. J&L proposes that the term be construed in a non-industry specific manner as “a filtering medium for liquid-solid separation.” Alternatively, if the Court finds that the ‘940 patent is limited to the pulp and paper industry, J&L proposes the construction: “a screening element made of a perforated metal plate.” J&L Construction Mem. at 22. AFT proposes an industry-specific construction for “screening medium,” where that industry is paper and pulp: “a barrier with openings or perforations for passing stock therethrough, which removes oversized, troublesome and unwanted particles from good fiber.” Opp’n Construction Mot. at 12-14. The Court largely adopts AFT’s construction.

The claims and the specification do not limit the terms of the patent in an industry-specific manner. AFT, however, unambiguously limited the patent’s scope during its prosecution of the

reissue. The claim terms do not limit the ‘940 patent to the paper and pulp industry. For example, while independent claim 10 asserts “[a] screen plate *for screening pulp*,” ‘940 patent, Col. 14, Ln. 13 (emphasis added), no such limitation appears in independent claim 1. See also claim 18 (applying the limitation “for use in screening for pulp”). The fact that the limitation, “for screening pulp” appears in many claims but is absent in others, leads the Court to conclude that the claims themselves do not limit the invention to use in the paper and pulp industry. This conclusion is bolstered by the specification, which begins: “The present invention relates to screen plates, e.g. screen cylinders and flat screen plates, for use, *for example*, in the pulp and paper industry” ‘940 patent, Col. 1, Lns. 11-13 (emphasis added). As with the claims, the preferred embodiments described in the specification at times explicitly note that the embodiment is for use in screening pulp, see, e.g., id., Col., Lns. 35-37; id., Col. 4, Lns. 63-64; id., Col. 5, Lns. 58-60, and at other times express no such limitation, see, e.g., id., Col. 5, Lns. 42-48; id., Col. 6, Lns. 41-53. Giving the claims “their broadest reasonable construction” in light of the specification, see Phillips, 415 F.3d at 1316, the ‘940 patent does not appear limited to use in the paper and pulp industry.

As noted, however, prosecution disclaimer attaches where a patent applicant makes statements that unequivocally disavow the scope of the claims during the prosecution history providing competitors with notice of a narrowed scope of subject matter covered by the invention. Schwing, 305 F.3d at 1324-25. AFT made unmistakable statements during its prosecution of the ‘940 patent, specifically in response to the Patent Examiner’s rejection of the patent as anticipated by the Gillespie. See O’Brien Decl., Ex. B, Parts 25, 29 (Dkt. No. 60-5). The Patent Examiner rejected the application despite his finding that “applicant’s claimed invention is merely intended for use in a pulp process.” O’Brien Decl., Ex. B, Part 25 (Dkt. No. 60-5). AFT’s response to the

rejection highlighted that finding, unmistakably denying that the scope of the claimed invention extended beyond pulp and paper. O'Brien Decl., Ex. B, Part 29 (Dkt. No. 60-5) at 20-24. AFT, for example, argued to the Examiner that "[c]learly, the invention recited in claim 1 [which does not explicitly note for use for screening pulp] is a screen cylinder used in the treatment of pulp." Id. at 21. In fact, AFT's entire argument distinguishing the claimed invention as not anticipated by Gillespie emphasizes the former's limited application in the pulp treatment art and insists that the Gillespie is neither directed toward, nor appropriate for, pulp fiber sorting. Id. The prosecution history, thus, evidences a clear and unequivocal disavowal of coverage beyond the pulp treatment industry.

J&L's proposed construction of "screening medium" as "a filtering medium for liquid solid separation" is rejected. The problem with this construction is that once the industry-specific context is embraced, "screening" takes on a specific meaning, namely the separation of solid from solid, and is distinguished from "filtering," which involves liquid-solid separation. J&L's own experts' testimony, a valuable source of extrinsic evidence, confirms this. See, e.g., Hutton Decl., Ex. U, Venditti Dep. (Dkt. No. 51-28) at 71:14-71:24; O'Brien Decl., Ex. P, Seifert Dep. (Dkt. No. 60-21) at 46. Admittedly, AFT never explicitly distinguished the '940 patent as not being a filter, nor distinguished the Gillespie as a filter, rather than a screen. Nevertheless, while the Court is to construe the claim terms in the broadest way reasonable in the context of the specification, the scope of that construction is always constrained by the meaning such terms would be given by one of ordinary skill in the art. Phillips, 415 F.3d at 1316 (citing In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004)). Here, the scope is constrained by the ordinary meaning the term "screening medium" is given in the pulp industry, which, as noted by experts, is distinct from what

is meant by “filtering.” J&L’s construction is, therefore, rejected.

In arguing to the Patent Examiner, AFT asserted that the claim terms have particular meanings in the pulp treatment art and articulated those meanings by way of definitions supplied by the Handbook of Pulp and Paper Technology. O’Brien Decl., Ex. B, Part 29 (Dkt. No. 60-5). Using the Handbook, AFT adopted the following definitions:

SCREEN: Separation device utilizing some type of perforated barrier for removing unwanted material from stock[*] stream.

SCREENING: Process step involving passage of stock[*] through some form of perforated barrier to remove oversize, troublesome and unwanted particles from good fiber.

SCREEN PLATE: Perforated metal plate utilized on many designs of pulp screening equipment that impedes pulp flow and is instrumental in causing separation between suspended particles on the basis of their size, shape, and/or flexibility

STOCK: A mixture of pulp and water with or without non-fibrous additives

Id. at 21-22. AFT then “submit[ted] that this meaning of the term ‘screen plate’ in claim 1 is consistent with this meaning in the art.” Id. at 22. Curiously, in view of that statement, claim 1, in fact, does not contain the term “screen plate.” Rather, claim 1 refers to a screen cylinder, which, as noted, is a cylindrically shaped screen plate. The “screen cylinder” in claim 1, as with all mentioned screen cylinders and screen plates in the ‘940 patent, is described as an assembly of a “screening medium”— which the Court finds is synonymous with “screening plate”— and a “backing plate.” The Court is thus left with two options as to what AFT is referring to when it argues that the term “screen plate” in claim 1 is consistent with the definition it argued to the Examiner: 1) “screen plate” in this argument may refer to the “screen cylinder” claimed in claim one; or 2) “screen plate” in this argument may refer to the “screening medium” that is one of the two components of the assembly that comprises the “screen cylinder.”

The first option cannot be correct. A screen cylinder is a type of screen plate. ‘940 patent, Col. 1, Lns. 12-13. However, if the screen cylinder referred to in claim 1 is construed as a “perforated metal plate . . . that impedes pulp flow and is instrumental in causing separation between suspended particles on the basis of their size, shape, and/or flexibility” then that claim actually results in an assembly of three elements, rather than the two that are clearly required by the claims and the specification. That is, if the screen cylinder in claim 1 is defined as a “perforated metal plate . . . that impedes pulp flow and is instrumental in causing separation between suspended particles on the basis of their size, shape, and/or flexibility,” which is itself comprised of a “barrier with openings or perforations for passing stock therethrough which removes oversized . . . particles from good fiber”⁷ and a backing plate, then this claim describes a three-part assembly that is unlike the two-part assembly consistently and repeatedly described in the specification. See, e.g., ‘940 patent, Col. 2, Lns. 22-23 (“the present invention provides a screen of two separate layers”). The resulting incongruence between claim 1, so construed, and the specification would render claim 1 invalid under 35 U.S.C. § 112. See 35 U.S.C. § 112 (requiring a specification that “shall contain a written description of the invention”). The same difficulty emerges if these constructions are applied to independent claim 10.

If, however, the definition of “screen plate” argued by AFT to the Patent Examiner and submitted to the Examiner as being consistent with its (non)use in claim 1 are applied to the term “screening medium,” a more coherent result obtains. This option assumes that, in this instance, AFT mistakenly refers to “screen plate” when in fact it means “screening plate,” which is equivalent to screening medium. While applying this assumption results in a coherent claim construction, it

⁷ AFT’s construction of “screening medium.” Opp’n Construction Mot. at 14.

does not evidence a clear intent to deviate from the ordinary meaning of screening medium nor rest upon “words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” Teleflex, 299 F.3d at 1324. Relying upon such unclear prosecution history to define the term “screening medium” as metal perforated plate to that term, as J&L proposes, is inappropriate. See id.; Omega Eng’g., 334 F.3d at 1324.

A third option for construction of “screening medium” is available by reference to extrinsic material, namely the Handbook of Pulp and Paper Technology used by AFT during prosecution of the patent. It defines “screening” as a “process step involving passage of stock[*] through some form of perforated barrier to remove oversize, troublesome and unwanted particles from good fiber.” Thus, “screening medium” is properly construed as the medium employed in this “process step,” which is identified in the definition as a “perforated barrier.” Unlike AFT’s proposed construction, the Handbook does not provide for “openings” as well as “perforations” and the Court sees no reason to adopt this additional characteristic. Similarly, the definition does not limit the medium to metal, nor do the claim terms and specification, see, e.g., ‘940 patent, claim 21 (allowing for a ceramic screening medium); id., Col. 11, Lns. 63-65. Hence, J&L’s construction, which requires the medium be metal is contrary to the description. Accordingly, a “*screening medium*” is *a perforated barrier through which stock is passed to remove oversized, troublesome, and unwanted particles from good fiber.*

3. “Backing Plate” is a Structural Support for the Screening Medium that Includes a Metal Plate.

J&L suggests that the ordinary meaning of a “backing plate” is “a support for a screening element that is made from a flat piece of metal.” J&L’s Mem. in Opp’n to AFT’s Infringement Mot. (Dkt. No. 39) (“Opp’n to Infringement Mot.”) at 11. AFT proposes that the term instead

means “a structural support for the screening medium that includes a metal plate with openings.” AFT Reply to J&L’s Mem. in Opp’n to AFT’s Infringement Mot. (Dkt. No. 44) at 8. Thus, the parties disagree as to whether a “backing plate” must originally exist as a flat piece of metal. J&L argues it must originally be a flat plate that can be rolled where a cylindrical shape is desired; AFT argues that no such limitation exists, and it can, instead, be cast originally as a cylinder. Both parties assert that their construction finds support in the claims and specification of the ‘940 patent and is further confirmed by extrinsic dictionary definitions.

The ‘940 patent does not explicitly define “backing plate.” The specification employs variations of the term, including a “backing plate” or “structural backing plate,” which may exist “in either flat or cylindrical configurations,” see, e.g., ‘940 patent, Col.5, Lns. 10-12, a “generally cylindrical structural backing plate,” see id., Col. 5, Lns. 45-46, and a “backing cylinder,” see, e.g., Col. 6, Lns. 45, 60-61. None of the claims refer to a “backing cylinder,” though they do recite a “cylindrical structural backing plate” (claim 1) and a “screen plate . . . wherein said . . . backing plate [is] cylindrical” (claim 11). The claims do not specify whether the “backing plate” must be made from a flat piece of metal. The specification describes an embodiment of the invention wherein the “backing plate . . . comprises a perforated plate having a plurality of relatively large openings” Id., Col. 2-3 Lns. 66-67, 1-2. That same embodiment may “form[] a screen cylinder” where “the screening plate is *preferably formed initially in a flat configuration* . . . then *rolled* into a cylindrical configuration [and] the *backing plate is rolled* into a cylindrical shape.” Id., Col. 3, Lns. 12-23 (emphasis added). The specification returns to this description of “rolling” a backing plate in numerous embodiments of the invention. See, e.g., id., Col. 6, Lns. 44-45 (relating a method of manufacture that includes the “rolling of a backing plate”); id., Col. 8, Lns.

63-67 (referencing an embodiment in which “the screening and backing plates . . . lie in a flat configuration . . . [and t]hereafter . . . are rolled into cylindrical form.”). Other embodiments describing screen cylinders, however, do not describe “rolling.” See, e.g., *id.*, Col. 5, Lns. 42-57; *id.*, Col. 6 Ln. 53-Col. 7 Ln.11. Nevertheless, referencing the definition of “plate” found in the McGraw Hill Dictionary of Scientific and Technical Terms, J&L seeks to construe “backing plate” to require that the component originally exist as a flat piece of metal, and that, whenever a cylindrical form is desired, be rolled into such form. The Court rejects this construction.

First, the claims themselves do not limit the “backing plate” to a component originally existing as a flat metal plate. Rather, they note that the backing plate may be cylindrical and nowhere state a process, for example, rolling, by which that shape is achieved. Similarly, the specification sometimes, but not always, identifies rolling as a method of achieving a cylindrically shaped backing plate. The Court finds significance in the inconsistent drafting as to the formation of a cylindrically shaped “backing plate.” Here, the prosecution history provides no basis for altering the broader scope suggested by the claims and specification as to the term “backing plate.” Hence, importing J&L’s proposed limitation into the claims simply based upon some described embodiments would be inappropriate.

Finally, adopting the construction proposed by J&L would yield redundancies if that definition were applied to all “plates” mentioned in the patent. For example, the specification describes one variation “[w]here a flat screen plate is desired, the two flat plates are . . .” *Id.*, Col. 3, Ln. 5. Another description notes that “[t]he flat backing plate may then be rolled into cylindrical form.” *Id.*, Col. 11, Lns. 24-25. Were “plate” defined as a flat piece of metal, the use of the qualifying adjective “flat” in the quoted language would be duplicative, which suggests that no such

limitation is intended. Similarly, where a screen cylinder is desired, the specification states, “the screening plate is *preferably* formed initially in a flat configuration . . .” *Id.*, Col. 3, Lns. 11-12 (emphasis added). If the plate is “*preferably formed*” in a flat configuration, it is clearly not *necessarily formed* in that configuration initially. In light of these considerations, the limitations J&L proposes would yield a construction contrary to that mandated by the intrinsic evidence, and, therefore, are inappropriate. *See Vitronics*, 90 F.3d 1583-84. The Court instead adopts AFT’s proposed construction which better comports with the intrinsic evidence. Accordingly, as used in the ‘940 patent, “*backing plate*” means a structural support for the screening medium that includes a metal plate.⁸

4. “Perforated” Means Pierced or Punctured with Holes

In oral arguments, AFT raised “perforated” as a term requiring construction. Tr. (Dkt. No. 106) at 53-56. AFT suggests the term means “having holes or perforations.” AFT’s Post-Hearing Br. at 8. J&L agrees that the term requires holes, but asserts that they must be made by piercing or puncturing. J&L Post-Hearing Br. at 10. The Court adopts J&L’s construction.

The claims and specification do not define “perforated,” however, extrinsic evidence makes clear that its construction requires puncturing or piercing; that conclusion in no way contradicts the claims. J&L’s construction comes from the McGraw Hill Dictionary of Scientific and Technical Terms’ definition of the verb, perforate, and the noun perforation. *See* Cross Decl., Ex. C (Dkt. No. 39-5). Both forms of the term note a hole resulting from piercing or puncturing. *Id.* Similarly, the general use dictionary supplied by AFT defines “perforation” to mean “a hole or pattern made by or

⁸ The Court does not construe the term “backing plate” to require openings. This additional limitation, suggested by AFT, is recited in the claims, *see* claims 1 and 10; to construe the term “backing plate” to also require openings appears unnecessary and largely redundant.

as if by piercing or boring.” O’Brien Decl., Ex. G (Dkt. No. 113-8). Thus, both the technical and general use dictionaries supplied by the parties strongly suggest that “perforated” should be construed to mean characterized by holes made by piercing or puncturing. That construction fits easily with the specification. The sole exception is a one-sentence mention that “a wedgewire screening plate may be used.” ‘940 patent, Col. 11, Lns. 64-65. “Wedgewire” is not recited in any of the claims. Its singular mention in the specification, particularly in light of AFT’s representation to the Patent Office in which it defined the screening element as “a perforated barrier” or “perforated metal plate,” does not change the Court’s conclusion that the ordinary meaning and the meaning given to “*perforated*” in the ‘940 patent is *pierced or punctured with holes*.

5. “Slots” and “Openings” are Limited to Slots and Openings Less than .254 mm Wide

The ‘940 patent employs the term “openings” in claims 1 and 37 and the term “slots” in claims 10, 11-14, and 39. In the specification and claims, the term “openings” is sometimes used in reference to a feature of the screening plate/medium, see id., Col. 5, Lns. 43-45; Col. 5, Lns. 55-57; Col. 13, Lns. 25-26, and sometimes used in reference to a feature of the backing plate, see, e.g., id., Col. 2-3, Lns. 66-67, 1-2; Col. 5, Lns. 55-57; Col. 13, Lns. 40-44, whereas the term “slot” is always used in reference to a feature of the screening plate/medium.⁹ “Slots” is not defined in the specification, however, the term appears to be a subset of “openings,” which the specification states “is intended to encompass apertures of all shapes and sizes, including holes, slots, orifices and passageways.” Id., Col. 5, Lns. 38-41. One preferred embodiment of the present invention provides “a slot width of 0.5 mm.” Id., Col. 12, Ln. 5. Accordingly, AFT seeks to construe these terms

⁹ The terms “openings” and “slots” are also used in the specification in reference to a feature of traditional screens where no distinction is made as to separate screening medium and backing plate components. See, e.g., ‘940 patent, Col. 1 at 33, 60.

broadly, with “openings” simply meaning, something that is open, and “slots” meaning a narrow opening or groove. Opp’n Construction Mot. at 16-18.

Despite the apparent breadth of “openings” and “slots” provided for by the claims and specification, AFT unequivocally limited the scope of these terms during the prosecution history. Again while attempting to show that the Gillespie did not anticipate the present invention, AFT distinguished the former as inappropriate for the use towards which the latter was solely directed, namely pulp treatment. To do so, AFT emphasized, “the slot sizing of the Gillespie screen further underscores how inappropriate the device is for screening pulp fibers.” Mesiti Decl., Ex. D1 (Dkt. No. 33-16) at 80. The slot size of the Gillespie is .762 mm. Id. AFT explained, “this slot size would be totally inappropriate for screening . . . pulp fibers. . . . [P]ulp fibers have diameters less than 50 microns . . . and *typically* slot widths of 0.2 mm would be used for *aspects* of the [present] invention.” Id. (emphasis added). AFT continued, “[t]he slots of Gillespie *are over three times the size of the slot width* of the present invention.” Id. (emphasis added). Based upon these statements to the Examiner, J&L seeks to narrow the definition of “slots” and “openings” to include only slots or openings with widths of 0.2 mm or less. Construction Mem. at 15-17.

The statements made by AFT during the prosecution history in order to avoid anticipation by the Gillespie constitute an unmistakable disavowal of the full scope that the claim terms and specification indicate for the terms “slots” and “openings.”¹⁰ That disavowal, however, is slightly

¹⁰ While AFT refers in this excerpted history only to “slots,” it is clear that it is equally disavowing “openings” insofar as they relate to the screening plate/medium. AFT makes the above argument to show that “Gillespie does not anticipate the invention recited in claim 1.” Mesiti Decl., Ex. D1 (Dkt. No. 33-16) at 80. Claim 1, however, employs the term “openings” rather than “slots.” AFT later makes the same argument with regard to claim 10, which uses “slots.” Id. at 81. Here, as in the specification, the terms “slots” and “openings” appear interchangeable, at least when directed to the screening plate/medium.

narrower than the construction proposed by J&L. AFT, in arguing to the Patent Examiner, clearly disavowed any slot width that was not suitable for screening pulp. AFT stated that would “typically” limit slots used in the invention to 0.2 mm. That statement does indicate a clear intent to *always* limit the slots to 0.2 mm. AFT went on to assert a more definitive limit for slots employed in the invention when it flatly stated that the .762 mm slots found in the Gillespie “are over three times the size of the slot width of the present invention.” AFT, thereby, unequivocally disavowed any slot with a width equal to or greater than 0.254 mm. Having done so during prosecution, AFT cannot now argue a broader interpretation of these terms. Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995) (“A patentee may not proffer an interpretation for the purposes of litigation that would alter the indisputable public record . . . and treat the claims as a ‘nose of wax.’”) (quoting Senmed, Inc. v. Richard-Allan Med. Indus., 888 F.2d at 815, 819 n.8 (Fed Cir. 1989); see also Texas Instruments, Inc. v. Int’l Trade Comm’n, 988 F.2d 1165, 1174-75 (Fed Cir. 1993) (prosecution history estoppel applies where unmistakable statements were made to the Patent Office in support of patentability); Cf. Haliczer v. United States, 356 F.2d 541, 545 (Ct. Cl. 1966) (“Plaintiff may not here take a position inconsistent with the one he maintained before the Patent Office in the proceedings which led to the issuance of the patent”). Thus, the terms “*openings*” and “*slots*” mean *openings or slots with widths less than 0.254 mm*.

6. “Engagement With” Means to Interlock or Mesh With

At the claim construction hearing, AFT raised “engagement with” as a term requiring construction. Tr. (Dkt. No. 106) 48-49. The term appears in claims 1 and 10. AFT proposes the Court construe the term to mean “to interlock with.” AFT’s Post-Hearing Br. at 12. It asserts that this definition, found in the Merriam-Webster’s Ninth New Collegiate Dictionary, is appropriate as

the intrinsic evidence provides no alternative definition and no specialized meaning for the term exists in the pulp industry.¹¹ AFT’s Post-Hearing Br. at 12. J&L counters that the Court should construe “engagement with” simply to mean “in contact with,” stating that this definition is consistent with the intrinsic evidence, AFT’s general use dictionary, and related definitions found in the McGraw Hill Dictionary of Scientific and Technical Terms. J&L Post-Claim Construction Hearing Br. (Dkt. No. 108) (“J&L Post-Hearing Br.”) at 13-16. Under J&L’s construction “engaged” components “remain separate, in contact with one another, and capable of movement.” Id. at 15.

The Court adopts AFT’s proposed construction. “Engagement” does not appear to have any specialized meaning in the art. Thus, a general use dictionary provides valuable insight into the term’s ordinary meaning.¹² “Interlock” comports with the specification and claims, whereas mere “contact with” fails to do so. The specification describes individual components firmly secured to one another as “engage[d].” ‘940 patent, Col. 3, Lns. 5-10 (explaining that by registering the backing and screening plates together, then *securing* one to the other, “[t]he backing plate thus engages the screening plate”); see also id., Col. 3, Lns. 28-31 (stating that “shrink-fitting one plate to the other may be itself sufficient to secure the plates to one another”); id., Col. 6, Lns. 41-53 (describing a method of manufacturing a preferred embodiment of the present invention that includes “shrink-fitting the cylinders into engagement one with the other”). The fact that the specification indicates that an additional fastener, e.g. a weld, rivet, or screw, is generally added

¹¹ The most relevant definition found in Merriam-Webster’s Ninth New Collegiate Dictionary defines “engage” as “to interlock with: MESH; *also* : to cause (mechanical parts) to mesh.” Dkt. No. 82, Ex. D.

¹² The term is not defined in the technical dictionary J&L supplies.

does not require the limitation J&L suggests. Accordingly, “*engagement with*” means to interlock or mesh with.

7. Means-Plus-Function Claims

The phrase “means for releasably connecting” appears in claims 2-5, 15, 25, and 32-35, each of which, accordingly, shall be construed as means-plus-function claim limitation. See Greenberg v. Ethicon Endo-Surgery, 91 F.3d 1580, 1584 (Fed. Cir. 1996). Only claims 2, 15, and 32 require identification of the corresponding structure, as the rest expressly provide a structure constituting the “means,” naming welds, rivets, screws, adhesives, and solders. Claim 25 additionally asserts “a shrink-fit” as a “means for releasably connecting.” The scope of the means-plus-function claims must be ascertained; additionally, of the recited “means for releasably connecting,” three require construction: “rivets,” “adhesives,” and “shrink fit.”

a. “Means for Releasably Connecting”

Where a claim employs “means-plus-function” language the Court must undertake a specific construction analysis whereby it first identifies and construes the function described in the claim and then determines the corresponding structures that constitute “means” for performing that function. 35 U.S.C. § 112; Micro Chem., Inc. v. Great Plains Chem. Co., Inc., 194 F.3d 1250, 1258 (Fed. Cir. 1999); Lockheed Martin Corp. v. Space Systems/Loral, Inc., 324 F.3d 1308, 1319 (Fed. Cir. 2003); Telecordia Tech., Inc. v. Cisco Systems, Inc., ___ F.3d ___, 2010 WL 2653251, at * 9-10 (Fed. Cir. July 6, 2010). “In identifying the function of a means-plus-function claim, a claimed function may not be improperly narrowed or limited beyond the scope of the claim language [nor] may the function be improperly broadened by ignoring the clear limitations contained in the claim language.” Lockheed Martin, 324 F.3d at 1319 (internal citations omitted). Similarly, 35

U.S.C. § 112 prohibits “incorporation of structure from the written description beyond that necessary to perform the claimed function.” Micro Chem, 194 F.3d at 1258.

The function of the means-plus-function language is clear from the claims; it is “releasably connecting” the component “screening medium” and “backing plate.” The parties dispute the scope of structures constituting “means” for performing that function, the permanency of the connection these means permit, and the method of their detachment. J&L asserts that the proper construction for the phrase is: “a structure directly connected to two parts that must be broken or removed to permit separation of the two parts[, w]hereby welds, rivets screws, adhesives, solder and equivalents are the only ‘means for releasably connecting.’” J&L Construction Mem. at 5. That proposition insists upon 1) *direct physical contact* between the screening and backing plates; 2) a secure connection between these components which may be *separated only through breaking or removing* the connecting structure; and 3) a limit to the means available for creating such connection, one that includes only those materials (and their equivalents) listed in the claims and further excludes “a shrink-fit” as recited in claim 25. AFT rejects each of the enumerated limitations, proposing instead the following construction: “structure and/or materials which allows the backing plate to be releasably connected to the screening medium . . . [which] include welds, adhesives, solder, rivets, shrink-fit, heat fit and equivalents thereof.” Opp’n Construction Mot. at 20. AFT thus indicates that the Court need not particularly elucidate what it means to be “releasably connected;” that no direct physical contact is necessary; that breaking or removing a structure is also not necessary in order to separate components so connected; and that the means of creating such structure include all those listed in the claims and specification, including a “shrink-fit” and a “heat fit.” Id.

While AFT’s construction of “means of releasably connecting” is hopelessly circular,

defining it by reference to the very words requiring construction, see Lockheed Martin, 324 F.3d at 1319 (court must first identify the claimed function then “construe the meaning of the words used to describe the claimed function, using ordinary principles of claim construction”); J&L seeks to define the function and identify the means covered under it by reference to the specification. This latter approach is proper under 35 U.S.C. 112, the final paragraph of which provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6; see also, Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1308 (Fed. Cir. 1998); Lockheed Martin, 324 F.3d at 1319.

The claims do not define “means of releasably connecting,” though they do provide examples of these means. The specification further clarifies the structures covered under the “releasably connect” function. In a first preferred embodiment for a flat screen plate, the backing and screening plates “are registered one with the other . . . and secured one to the other, for example, by welding, soldering, riveting or adhesives. The backing plate thus engages the screening plate.” ‘940 patent, Col. 3, Lns. 5-10. Alternatively, to achieve a screen cylinder, the screening plate and backing plate are similarly registered one with the other, “then rolled into a cylindrical configuration The edges of the screening plate are then secured, for example, by welding” Id., Col. 3, Lns. 11-21. Another variation, this time for an outflow cylinder, occurs where

the backing plate is rolled into a cylindrical shape having an inside diameter slightly smaller than the outside diameter of the screening plate. The backing plate is then heated to expand it, thereby enabling the cylindrical screening plate to be received within the backing plate. The backing plate is then heat-shrunk onto the screening plate. The plates are then secured one to the other, e.g. by welding, although shrink-fitting one plate onto the other may itself be sufficient.

Id., Col. 3, Lns. 22-31. Because the screening plate “bear[s] against the backing plate” this method of construction transmits the structural strength of the backing plate to the screening plate. Id., Col. 3, Ln. 35. Additionally, it allows the screening plate to “be replaced when worn by breaking the welds or other securing means between the backing and screening plates. By machining, or chemical treatment if adhesives are used, the worn screening plate may be removed from the backing plate” Id., Col. 4, Lns. 19-23.

Other embodiments have similar descriptions. One, however, refers to the backing plate and screening plate “in engagement with one another” without reciting a particular “means.” Id., Col. 5, Ln. 49. Another describes a method of manufacture where the screening cylinder and backing cylinder are in engagement as a result of shrink-fitting; no additional “means” is recited. Id., Col. 5, Ln. 53-Col. 7, Ln. 11.

The Court may not narrow or broaden the structures covered under the means limitation of the claims based upon the described embodiments. MicroChem., 194 F.3d at 1258. However, the structures and their equivalents, i.e. those that include the essential physical/structural components of the disclosed apparatus corresponding to the “releasably connect” function, disclosed in the specification constitute the “means.” See Chiuminatta, 145 F.3d at 1308 (“the ‘means’ term in a means-plus-function limitation is essentially a generic reference for the corresponding structure disclosed in the specification”); see also Omega Eng’g, 334 F.3d at 1321 (“A disclosed structure is corresponding only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim. In other words, the structure must be necessary to perform the claimed function.”) (citations and internal quotations omitted). Undoubtedly, the corresponding structures disclosed in the claims and above-quoted language from the specification

include welds, rivets screws, adhesives, solders, and their equivalents. These structures are repeatedly referred to in the specification and claims. Notably, each of these describes a physical structure which must be broken or removed in order to separate the component backing plate and screening plate. AFT contends, however, that a “shrink fit” and “heat fit” are also structures constituting “means of releasably connecting,” and neither of these are a structure directly connected to the plates, nor require breaking or removing; thus, AFT argues those characteristics are not essential features of “means for releasably connecting” and should not limit the claims employing that language.

b. “Shrink fit”

Claim 25 names a “shrink-fit” as a “means for releasably connecting” as used in claim 2. No claim recites a “heat-fit.” As seen in the specification language previously quoted, “shrink-fitting” may alone, or in combination with another means, secure the backing and screening plates. The backing plate may be “heat-shrunk” onto the screening plate. Neither “a heat-shrink,” “a heat-fit,” nor “a shrink-fit,” that is, the noun form of heat-shrinking, heat-fitting, or shrink-fitting is mentioned in the specification. J&L asserts that the terms heat-shrinking and shrink-fitting are equivalent for purposes of the patent, and that neither, even when conjugated as a noun, actually describe a structure; rather, these terms describe processes and are thus invalid under 35 U.S.C. 112 ¶ 4.¹³ J&L’s Construction Mem. at 6, 9-13. AFT asserts the two terms are distinct, with shrink fitting being broader, and that both are valid. Opp’n Construction Mot. at 21-23.

¹³ 35 U.S.C. § 112, ¶ 4 provides, “a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.” Were a “shrink-fit” not a structure, claim 25 would not further limit the claimed subject matter. See *infra* sec. III.C.3.

(I) “Shrink-fit” and “Heat fit” are Equivalent

Shrink-fitting and heat-fitting or heat-shrinking are used equivalently in the specification. AFT asserts that heat-fitting describes a thermal process and shrink fitting need not occur through such process, but may rather result from press-fitting or interference fitting. Opp’n Construction Mot. at 22. This position is belied by the specification as well as by compelling extrinsic evidence.

AFT asserts first that J&L’s objection to a shrink-fit is an invalidity argument, rather than a claim construction issue. This is incorrect. The construction of the structures covered by the limitation, “means for releasably connecting” is an issue of claim construction. Chiuminatta, 145 F.3d at 1308. That fact is not changed because the result of the construction eventually given to one disputed structure may affect later invalidity analysis. AFT next argues that “a shrink-fit includes structure.” Opp’n to Construction Mot. at 21. AFT supports this argument on the fact that claim 25 recites “a shrink-fit,” that is, a noun; on the prosecution history; on separate definitions for “shrink” and “fit” pulled from a general use dictionary; and expert testimony. Id. at 21-23. In making these arguments, AFT, citing the specification and expert testimony, further asserts that “a shrink-fit” does not require heating or cooling and is, therefore, not equivalent to a “heat-fit” or “heat-shrink.” Id.

Beginning first with the issue of whether shrink-fitting is a thermal process, the specification indicates that it is. See, e.g., 940 patent, Col. 3, Lns. 24-31. So too does extrinsic evidence in the form of a technical dictionary definition supplied by J&L. See Cross Decl., Exs. B, C (Dkt. No. 45-7) (citing the McGraw Hill Dictionary of Scientific and Technical Terms defining “shrink fit” as: “A tight interference fit between mating parts made by shrinking-on, that is, by heating the outer member to expand . . . for easy assembly, then cooling so that the outer member contracts” and

distinguishing “interference fit” from “press fit”). AFT correctly notes that the specification uses the both “shrink-fit” and “heat-shrink.” Opp’n to Construction Mot. at 23. The specification’s use of “heat-shrink,” however, is descriptive of the process of shrink-fitting. See 940 patent, Col. 3, Lns. 24-31; Col. 9, Lns. 6-23. Moreover, to the extent that AFT’s statement that “the ‘940 Patent refers to a ‘heat-shrink’” suggests that the patent refers to heat-shrink as anything other than a verb, it is untrue. Opp’n to Construction Mot. at 23. Finally, insofar as AFT bases its argument on the testimony of its expert, Dr. Gary Scott, Ph.D., see Opp’n to Construction Mot. at 22-23; O’Brien Decl., Ex. O (Dkt. No. 20) (associating one version of “shrink fit” with the sort of fit described in J&L’s dictionary as a “press fit”), the Court finds that other extrinsic evidence such as the technical dictionary definition supplied by J&L is more compelling, particularly in light of Dr. Scott’s admission that he is not an expert in mechanical devices or shrink-fitting, see Cross Reply Decl., Ex. E (Dkt. No. 84-6) at 67-69, and the fact that Dr. Scott’s report was “generated at the time of and for the purpose of litigation.” Phillips, 415 F.3d at 1318. Therefore, the Court construes “*shrink fit*” as: *A tight interference fit between mating parts made by heating the outer part to expand it or cooling the inner part to contract it so that the outer part fits into the inner part.*

(ii) “Shrink fit” Describes a Process not a Structure

Claims 2, 15, and 32 employ the phrase “means for releasably connecting” but do not specify a corresponding structure. The parties dispute whether a shrink-fit is a structure covered under the limitation, or, for that matter, a structure at all. AFT argues that “a shrink-fit includes structure” and supports this argument by reference to dictionary definitions of “fit” and “shrink”¹⁴ to

¹⁴ “Fit” is defined as the “degree of closeness between surfaces in an assembly of parts;” “shrink” is “to become smaller or more compacted.” O’Brien Decl., Ex. N (Dkt. No. 60-20)

arrive at its construction: “an assembly of parts where one part is made smaller relative to the other part.” Opp’n to Construction Mot. at 21-22. AFT also cites to the prosecution history, in which the Examiner found that “a shrink-fit” is a structure. These arguments are unavailing.

First, to the extent that AFT’s construction relies upon the definition of “fit” as the “degree of closeness,” it fails to recite a structure. AFT’s proposed construction recites a process, one in which “one part is made smaller relative to another part.”¹⁵ Further, insofar AFT seeks to define “a shrink-fit” by combining individual definitions from a general use dictionary of “fit” and “shrink,” the Court views the resulting construction with some suspicion. See Network Commerce, Inc. v. Microsoft Corp., 422 F.3d 1353, 1359-60 (finding that while the term “download component” is nowhere defined as a singular term, a construction resting upon separate dictionary definitions for “download” and “component” was untenable, particularly in light of the resulting breadth of that construction). That suspicion is heightened where, as here, the hyphenated term at issue is defined in a single definition available in a technical dictionary, and that definition better comports with the specification. Finally, the Court does not find that the prosecution history clearly evidences that “a shrink-fit” is a structure, and certainly does not evidence that AFT’s construction is correct.

Accordingly, the Court construes “*shrink-fit*” to mean: *A tight interference fit between mating inner and outer parts made by heating the outer member to expand it or cooling the inner part to contract it so that the outer part can fit into the inner part.* Additionally, because the above construction

¹⁵ 35 U.S.C. § 112, ¶ 6 provides that “[a]n element in a claim for a combination may be expressed as a . . . step for performing a specified function without the recital of . . . acts in support thereof, and such claim shall be construed to cover the corresponding . . . acts described in the specification and equivalents thereof.” While such “step-plus-function” claims are allowable, the claim must take the form of a “step-plus-function” claim, rather than, as here, a “means-plus-function” claim. See, e.g., O.I. Corp. v. Tekmar Co., Inc., 115 F.3d 1576, 1582-83 (Fed. Cir. 1997).

does not describe a structure, “*shrink-fit*” is not a “means for releasably connecting.”

c. A “Rivet” is a short rod having a head formed on one end and an opposite end formed into a second head to produce a permanent joining of two or more parts.

While listing a “rivet” as a “means of releasably connecting” the ‘940 patent does not explicitly define this term, which appears in claims 7 and 31. Accordingly, the Court shall construe it in accordance with its ordinary meaning for one skilled in the art. AFT asserts this means construing a rivet as: “a headed pin or bolt of metal used for uniting two or more pieces by passing the shank through a hole in each piece and then beating or pressing down the plain end so as to make a second head,” a definition drawn from Merriam-Webster’s Ninth New Collegiate Dictionary. See Dkt. No. 60-19. J&L proposes a different construction, drawn from the McGraw Hill Dictionary of Scientific and Technical Terms: “fasteners each with a short rod having a head at one end and an opposite end formed into a second head to produce a permanent joining of two or more parts.”¹⁶ See Dkt. No. 45-7. Technical dictionaries are typically better indicators of the meaning of terms as understood by those skilled in the art than their general use counterparts. See Phillips, 415 F.3d at 1318, 1321-22. Thus, the Court adopts the construction proposed by J&L, and finds that the term “rivet” means a short rod having a head formed on one end and an opposite end formed into a second head to produce a permanent joining of two or more parts.

d. An “Adhesive” is a Substance Used to Bond Two or More Solids so that They Act or Can be Used as a Single Piece

The same reasoning used in the Court’s construction of “rivet” governs its construction of “adhesive.” “Adhesive” is not defined in the intrinsic evidence. AFT draws its construction, “an

¹⁶ This definition of rivet imports the qualifying term “permanent” from the definition for “riveting.” The Court finds this combining of definitions appropriate, as the term “riveting” describes the process and quality of joining parts “by means of rivets.” Dkt. No. 45-7.

adhesive substance (as glue or cement)” from Merriam-Webster’s Ninth New Collegiate Dictionary, Dkt. No. 60-19, whereas J&L cites to the McGraw Hill Dictionary of Scientific and Technical Terms: “a substance used to bond two or more solids so that they act or can be used as a single piece.” As the latter definition comes from a technical dictionary and is likely more indicative of the meaning attributed to the term by those skilled in the art, the Court adopts that construction.

e. Breaking or Removal is a Limitation of “Means for Releasably Connecting”

The above constructions have largely defined the phrase, “means for releasably connecting.” J&L, however, insists one further limitation should be read into that term, namely that the structure constituting the “means” “must be broken or removed to permit the separation of the two parts.” Construction Mem. at 7-8. It advances this construction based upon the following description in the specification: “the screening plate can be replaced when worn by breaking the welds or other securing means between the backing and screening plates. By machining, or chemical treatment if adhesives are used, the worn screening plate may be removed from the backing plate” Id., Col. 4, Lns. 19-23.

The claims themselves in no way limit the term “means for releasably connecting” with breaking or removal. However, the quoted language clearly describes the methods of detaching the screening plate from the backing plate associated with each of the various structures that the Court has identified as “means for releasably connecting.” The only other mention in the description of the removal of a worn screening cylinder from a backing cylinder involves a preferred embodiment describing the two cylinders as being in “engagement one with the other” as a result of “shrink-fitting.” The Court has already found that “shrink-fitting” is a process and “a shrink-fit,” is not a structure, and hence, not a “means for releasably connecting.” Therefore, this second mention of

removal, which does not mention breaking, machining, chemical treatment, or other method of removing a structure, does not impact the Court's analysis of whether such breaking or removal is required where a "means of releasably connecting" is employed. That is, in the Court's view, this second description corresponds to claim 1's recitation of "opposed surfaces in engagement with one another" and does not affect the construction of "means for releasably connecting." The only "means" described are welds, rivets, screws, adhesives, solders, and equivalents. Each of these are structures, and each requires breaking or removal in order to allow the screening plate to detach from the backing plate. *Breaking or removing is, thus, a proper limitation for "means of releasably connecting."* Accordingly, the term "*means for releasably connecting*" means a structure directly connected to two parts that must be broken or removed to permit the separation of the two parts, whereby welds, rivets, screws, adhesives, solder, and equivalents are the only "*means for releasably connecting.*"

8. "Backing Plate" is a Proper Limitation of Claim 18

Claim 18 recites a "method of manufacturing a screen . . ." The preamble of that claim note "screening plate" and "backing plate" as components of that screen. J&L argues, however, that because "backing plate" appears nowhere else in the claim, and the three steps for manufacturing the screen relate only to the "screening plate," "backing plate" is not a proper limitation of claim 18. The Court disagrees.

Generally, "a preamble limits the invention if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim. Conversely, a preamble is not limiting where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." Catalina Mktg. Int'l, Inc. v.

Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) (citations and internal quotations omitted); see also Schumer v. Lab. Computer Sys., Inc., 308 F.3d 1304, 1310 (Fed. Cir. 2002).

As a general principle, “a claim preamble has the import that the claim as a whole suggests for it [W]hen the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.” Bell Commc’ns, 55 F.3d at 620; Pitney-Bowes, Inc. v. Hewlett-Packard, Co., 182 F.3d 1298, 1305 (Fed. Cir. 1999). “[R]eview of a patent in its entirety should be made to determine whether the inventors intended such language to represent an additional structural limitation or mere introductory language. In re Paulsen, 30 F.3d at 1479 (citations omitted).

Applying these principles to claim 18, “backing plate” is a proper limitation to the claim. While the claim describes the steps for forming groves in the screening plate and “backing plate” is not antecedent to those steps, the term nevertheless “give[s] meaning to the claim and properly define[s] the invention.” Gerber Garment Tech., Inc. v. Lectra Sys., Inc., 916 F.2d 683, 688 (Fed. Cir. 1990). The specification supports this conclusion, as it clearly and repeatedly describes the invention as a screen comprising a screening medium and a backing plate, and distinguishes the invention partly on that basis. See, e.g., ‘940 patent, Col. 2, Lns. 22-27; Col. 9, Ln. 52-Col. 10, Ln. 34. Thus, reference to the backing plate is neither extraneous, nor important only insofar as it describes the purpose or use of the invention. Rather, it is an essential component of the invention as defined. Therefore, “*backing plate*” is a proper limitation in claim 18.

III. SUMMARY JUDGEMENT MOTIONS

A. Standard of Review

Having exhaustively construed all disputed claim terms, the Court shall now turn to the parties' various summary judgment Motions. Dkt. Nos. 33, 50, 51. Federal Rule of Civil Procedure 56 provides that summary judgment is proper when "the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law." FED. R. CIV. P. 56(c)(2). The moving party bears the initial burden of identifying the portions of the record that demonstrate an absence of a genuine issue of material fact. See Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986).

In response, the nonmovant "must come forth with evidence sufficient to allow a reasonable jury to find in her favor." Brown v. Henderson, 257 F.3d 246, 251 (2d Cir. 2001). The nonmovant "may not rely merely on allegations or denials in its own pleadings" to overcome a motion for summary judgment. FED. R. CIV. P. 56(e)(2); see Carey v. Crescenzi, 923 F.2d 18, 21 (2d Cir. 1991); W. World Ins. Co. v. Stack Oil, Inc., 922 F.2d 118, 121 (2d Cir. 1990).

In considering the motion, the Court "must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in its favor." Consarc Corp. v. Marine Midland Bank, N.A., 996 F.2d 568, 572 (2d Cir. 1993). The Court may grant summary judgment only if no material facts exist that would allow a reasonable trier of fact to find in favor of the nonmoving party. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 251-52 (1986); see Canton Bio-Med., Inc. v. Integrated Liner Techs., Inc., 216 F.3d 1367, 1369 (Fed. Cir. 2000); BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1378-79 (Fed. Cir. 2007). It is not the Court's role to "weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for trial." Liberty Lobby, 477 U.S. at 249.

B. Infringement

Where a party moves for summary judgment as to the infringement of a patent, that party must prove that a comparison of the patent and the accused device reveals no issue of material fact exists as to the latter's infringement. Phonometrics, Inc. v. Northern Telecom, Inc., 133 F.3d 1459, 1463-64 (Fed. Cir. 1998). A plaintiff asserting infringement need only show that the accused device infringes on any single claim of the patent. Cross Medical Prods. Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1311 (Fed. Cir. 2005). Where the alleged infringement relates to a device claim, the plaintiff must prove that every structural limitation or its equivalent of the allegedly infringed upon claim is present in the accused device. Warner Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). Where the alleged infringement relates to a method claim, a plaintiff must show that every step of the claimed method is present in the manufacture of the accused device. BMC, 498 F.3d at 1378-79 (citing Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993)); NTP, Inc. v. Research in Motion, Ltd. 418 F.3d. 1282, 1318 (Fed. Cir. 2005) (citing Roberts Dairy Co. v. United States, 530 F.2d 1342, 1354 (1976)).

AFT asserts that, as a matter of law, J&L's V-Max cylinder infringes upon independent claims 1, 10, and 18 and dependent claims 2, 6, 8, 11-15, 19-20, 23, 27, 29, and 37-39 of the '940 patent. Mem. in Supp. of Infringement Mot. ("Infringement Mem.") at 14, 25. Applying the above term constructions, this is incorrect. J&L, for its part, argues that the V-Max, as a matter of law, does not infringe these claims. This too is incorrect.

1. Device Claims 1 and 10 and their Dependent Claims

Claims 1 and 10 of the '940 patent require a "screening medium," which, the Court has found, is a perforated barrier through which stock is passed to remove oversized, troublesome, and unwanted particles from good fiber. Supra sec. II.C.2. The Court found "perforated" means pierced

or punctured with holes. Supra sec. II.C.4. The V-Max cylinder, the screening element of which comprises two arc-shaped screen panels assembled from a series of wire strips closely aligned but with some space between, see Lutz Decl. (Dkt. No. 39-8) ¶¶ 8-17, does not literally exhibit a “screening medium,” so construed. Furthermore, claims 1 and 10 recite additional structural elements, including “openings” and “slots” respectively, which the Court has determined pertain only to openings or slots with a width less than .254. Supra sec. II.C.5. The record does not divulge the width of any openings or slots found in the V-Max. Thus, additional issues of material fact exist precluding summary judgment as to these claims. Accordingly, the Court denies AFT’s Motion for summary judgment for infringement as to claims 1 and 10.

J&L appears to admit that the above bases for denying AFT summary judgment does not require finding, as a matter of law, the V-Max’s non-infringement of claims 1 and 10. See Opp’n to Infringement Mem. at 24 (acknowledging that the V-Max wire bar assembly might be equivalent to a perforated barrier). Additionally, J&L has not provided information on the width of the V-Max openings, leaving a material factual issue unresolved. J&L invests much energy insisting that the V-Max does not include a “backing plate.” Id. at 10-15. This argument, however, is disposed of in light of the construction of that term. Supra sec. II.C.3.

Because there is no infringement of the independent claims as a matter of law, summary judgment as to infringement of the dependent claims is precluded. See Jeneric/Pentron, Inc. v. Dillon Co., Inc., 205 F.3d 1377, 1383 (Fed. Cir. 2000) (citing Wahpeton Canvas Co., Inc. v. Frontier, Inc., 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989)). Moreover, many of these claims recite “means for releasably connecting” not present in, or where issues of triable fact exist as to their presence in the V-Max, see, e.g., claims 2, 15, and 32 (reciting a screen according to claims 1 or 10

including a “means for releasably connecting”), claims 4 and 43 (where “means” recited in claim 2 includes an “adhesive”); see Lutz Decl. (Dkt. No. 39-8) ¶ 15 (noting the presence of epoxy); Fuierer Decl., Ex. D Venditti (Dkt. No. 47-7) at 51:7-54:19, Scott Decl. (Dkt. No. 75-3) ¶¶ 11-13.

Accordingly, the Court denies AFT’s Motion for summary judgment for infringement as to claims 2, 4, 6, 8, 11-15, 27, 29, 32, 34 and 37-39.¹⁷

The Court also denies J&L’s Motion for summary judgment as to the V-Max’s non-infringement of claims 2, 4, 15, 32, and 34. Triable issues of fact remain as to whether the V-Max includes an “adhesive,” which is a “means” recited in claims 4 and 34 and is a “means of releasably connecting,” supra sec. II.C.7, as recited in claims 2, 15, and 32. The Court grants J&L’s Motion with regard to claims 3, 5, 33, and 35, which recite “welds” and “solders” as “means.” There is no evidence that the V-Max includes such structure and, because the U Clips employed by the V-Max do not require breaking or removal, supra sec. II.C.7.e, these clips are not equivalent structures.¹⁸

2. Method Claim 18 and its Dependent Claims

Claim 18 describes three steps comprising a method of manufacturing a screen for use in screening pulp. AFT asserts that J&L’s method of manufacturing its V-Max cylinder infringes this method claim as a matter of law. Infringement Mem. at 22. The Court rejects this assertion.

The preamble notes that the patented method of manufacture is for a screen “formed of a

¹⁷ AFT did not seek summary judgment as to claims 4, 25, 32, or 34 in its Infringement Motion but asserts that the V-Max infringes upon these claims in its Response to J&L’s Motion for summary judgment. Dkt. No. 75 (“AFT Opp’n to Summ. J. Mot.”) at 19.

¹⁸ Claim 25 recites “a shrink-fit” as a “means for releasably connecting.” For reasons discussed below, the Court finds that this claim is invalid. Infra sec. III.C.3. It is equally apparent, however, that the V-Max does not exhibit a shrink-fit as construed above. Supra sec. II.C.7.b.(I). Thus, were claim 25 valid, summary judgment as to the V-Max’s non-infringement of this claim would issue.

screening plate and a backing plate, said screening plate having first and second opposite faces.”

The V-Max does not conclusively exhibit a “screening plate.” Supra sec. III.B.1. As to the method described, the V-Max’s method of manufacture does not, as a matter of law, follow every step of the claimed method. Step (a) of claim 18 describes “forming elongated . . . grooves in said first face” of the screening plate. Step (b) requires the “forming of openings through the bottom of the grooves in said first face and into the screening plate to terminate within the screening plate short of said second face.” Step (c) calls for “forming elongated grooves in the second face of the screening plate . . . to a depth to expose the openings formed in step (b) so that the openings extend entirely through said screening plate”

These steps, whether viewed sequentially or otherwise, do not, as a matter of law, match the method of manufacture of the V-Max. The V-Max is constructed by fastening long metal bars, or “wires,” in parallel, leaving elongated openings in the space between. See Lutz Decl. (Dkt. No. 39-8) ¶¶ 9-16. Triable issues exist as to whether this method practices steps (b) or (c) of claim 18. A conclusion that it does not would be reasonable given that the openings under the V-Max method are always fully open once the wires are clipped into place; there is no partial forming of these openings as described in step (b), nor any exposure of those partial openings as described in claim 18’s step (c). Id. at ¶ 16. AFT appears to admit as much in its Reply Memorandum where it states, “[i]n the process of assembling the wires, J&L *substantially performs* steps (a)-(c) of claim 18 simultaneously.” Dkt. No. 44 at 13 (emphasis added). This statement appears to argue not literal infringement, but infringement under the doctrine of equivalence. See Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1269 (“An element in the accused product is equivalent to a claim element if the differences between the two are ‘insubstantial’ to one of ordinary skill in the

art.” (quoting Warner-Jenkinson, 520 U.S. at 39-40)). Such arguments are notoriously fact-specific as “[h]ow equivalency to a required limitation is met necessarily varies from case to case due to many variables such as the form of the claim, the nature of the invention defined by it, the kind of limitation that is not literally met, etc.” Malta v. Schulmerich Carillons, Inc., 952 F.2d 1320, 1326 (Fed. Cir. 1991). Accordingly, J&L’s method cannot be said, as a matter of law, to infringe upon AFT’s patented method. BMC Resources, 498 F.3d 1373. AFT’s Infringement Motion is, therefore, denied as to independent claim 18 and dependent claims 19-20, 23. J&L’s Motion for summary judgment as to non-infringement of these claims is similarly denied. As the above discussion illustrates, issues of material fact exist as to whether J&L substantially performs AFT’s patented method.

C. Invalidity

Patents enjoy a presumption of validity. 35 U.S.C. § 282. That presumption can be overcome only through facts supported by clear and convincing evidence, see SRAM Corp v. AD-II Eng’g, 465 F.3d 1351, 1357 (Fed. Cir. 2006) (citing U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1563, (Fed. Cir. 1997)). Thus, where a party seeks summary judgment invalidating a patent, it can prevail only by submitting such clear and convincing evidence of the patent’s invalidity that no reasonable jury could find otherwise. Id. (citing Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)). A party may challenge a patent’s validity by introducing clear and convincing evidence that the patent was anticipated by prior art. 35 U.S.C. § 102(a); Linear Tech. Corp. v. Int’l Trade Comm’n, 566 F.3d 1049, 1066 (2009). Alternatively, a party may challenge a patent’s validity based on its obviousness to a person of ordinary skill in the art at the time of the patent application. 35 U.S.C. § 103; KSR Int’l Co. v. Teleflex, Inc., 550 U.S. 398

(2007). A party may also prove a claim's invalidity by showing its failure to comply with 35 U.S.C. § 112, ¶ 4.¹⁹ Pfizer, Inc. v. Ranbaxy Labs., Ltd., 457 F.3d 1284, 1292 (Fed. Cir. 2006) (citing Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1380 (Fed. Cir. 2006)).

1. Anticipation

A party is not entitled to a patent where “the invention was known or used by others in this country, or patented or described in a printed publication . . . before the invention thereof by the applicant for patent, or the invention was patented or described in a printed publication . . . or in public use or on sale . . . more than one year prior to the date of the application for patent.” 35 U.S.C. § 102. A party challenging the validity of a patent may prevail by demonstrating the existence of prior art that “was sufficiently accessible, at least to the public interested in the art, so that such a one by examining the reference could make the claimed invention without further research or experimentation.” In re Hall, 781 F.2d 897, 899 (Fed. Cir. 1986); see also In re Wyer, 655 F.2d 221, 226 (C.C.P.A. 1981). “A prior art reference anticipates a patent claim if the reference discloses, either expressly or inherently, all of the limitations of the claim.” Finnigan Corp. v. Int'l Trade Comm'n, 180 F.3d 1354, 1365 (Fed. Cir. 1999). Where the validity of a device claim is challenged on anticipation grounds, the challenger need only show that the prior art is structurally equivalent to the challenged patent; in the face of such a challenge, the patent owner cannot prove the validity of its patent by reference to its different use or function. In re Schreiber, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb, Inc., 909 F.2d 1464, 1468 (Fed. Cir. 1990).

¹⁹ 35 U.S.C. § 112, ¶ 4 requires that a claim articulated in dependent form must specify a further limitation to the subject matter claimed.

AFT seeks summary judgment as to the validity of all claims in the '940 patent. Dkt. No. 51. J&L seeks summary judgment as to the invalidity of claims 1 and 18, 19, 20, 22, and 23, claiming that they are anticipated by the Johnson Screens Brochure and/or the Yoshida Patent (U.S. Patent No. 4,764,277); it further defends against AFT's Validity Motion by reference to a purchase order from General Welding (Dkt. No. 64-8), the Brewster Patent (U.S. Patent No. 2, 301, 514), the PIMA Article (Dkt. No. 51-9), and the article "New Wave Screen Baskets Upgrade Existing Systems" (Dkt. No. 51-9) ("New Wave Article") each of which J&L contends is prior art invalidating the claims of the '940 patent. J&L's Mem. in Supp. of Summ. J. Mot. (Dkt. No. 50-40) ("J&L Summ. J. Mem."); Mem. in Opp'n to Validity Mot. (Dkt. No. 64).²⁰

J&L contends that claim 1 is invalid because it is anticipated by the Johnson Screens' screen cylinder, which it asserts is prior art that was depicted in a widely distributed brochure. Id. at 5. AFT disputes that the Johnson Screens Brochure pre-dates the application of the '072 patent, the predecessor of the '940 patent, and thus contests that it constitutes prior art. The parties' submissions, however, show that no issue of material fact exists as to this issue, and the Court finds that the Johnson Screens Brochure is prior art under 35 U.S.C. § 102(a).²¹ See, e.g. Cross Decl., Exs. I, K (Dkt. Nos. 50-16; 50-21; 50-23); Supplemental Cross Decl., Ex. C (Dkt. No. 64-5); Wilbert Decl., Exs. A-E, J (Dkt. Nos. 86-6, 86-7, 86-8, 86-13). Nevertheless, because the Brochure

²⁰ While J&L asserts each of these references as invalidating prior art, see Dkt. No. 64, it bases its Motion for summary judgment only upon the Johnson Screens Brochure and Yoshida patent, see Dkt. No. 50-40.

²¹ This Court previously struck AFT's reference to UK Johnson Filtration Systems, Ltd., see Dkt. No. 82 at 1, 7-8, as proof that the company producing the Johnson Screens Brochure was not incorporated until after the patent filing date. Advanced Fiber Tech. Tr. v. J&L Fiber Servs., Inc., No. 1:07-CV-1191, 2010 WL 1948242 (N.D.N.Y. May 12, 2010) (Kahn, J.) (striking reference as an improper argument raised in a reply brief).

fails to conclusively disclose each limitation of the '940 patent's claim 1, as a matter of law, it does not invalidate that claim. Specifically, the Johnson Screens Brochure does not disclose a "screening medium" that is "in engagement with" a "backing plate." Given the Court's construction of "engagement with," supra sec. II.C.6, J&L concedes as much. See, e.g., J&L's Opp'n to Validity Mot. (Dkt. No. 64) at 9-10. For this reason, as a matter of law, the Johnson Screens Brochure does not anticipate claims 2-3, 6, 8, 10-12, 14-16, 27-33, 37-39

J&L alleges that independent claim 18 and dependent claims 19, 20, 22, and 23 of the '940 patent, all of which relate to the method of its manufacture, are invalid as anticipated by the Yoshida and Brewster patents. Neither the Yoshida nor the Brewster, however, disclose a "backing plate," which is a proper limitation of claim 18. Supra sec. II.C.8. Accordingly, as a matter of law, they do not anticipate the '940 patent.

Peter Seifert, one of J&L's experts, states that the "Centerpipe Assembly Reactor No. 1" depicted in the General Welding documents discloses a screen assembly that can be used for the treatment of paper and pulp, which discloses the same essential elements of the '940 patent. Seifert Decl. (Dkt. No. 64-6). J&L contends that a General Welding purchase order ("the Purchase Order") confirms that the Centerpipe assembly is prior art and asserts that claims 1-3, 6, 8, 27-29, 31, 37 are invalid in light of this reference. AFT argues that the Purchase Order neither represents offer and acceptance, nor confirms that the sale was ever completed, and for this reason, it is not evidence of prior art sufficient to withstand its Motion for summary judgment. The Court agrees.

The Purchase Order fails to evidence the requirement of a sale per 35 U.S.C. § 102(b) by demonstrating offer and acceptance. See Linear Tech. Corp. v. Micrel, Inc., 275 F.3d 1040, 1050 (Fed. Cir. 2002) (Looking to common law to define an offer as "the manifestation of willingness to

enter into a bargain, so made as to justify another person in understanding that his assent to that bargain is invited and will conclude it.”) (internal quotation omitted). The January 4, 1979 purchase order demonstrates only that Johnson Screens received an order from General Welding; it cannot confirm that Johnson Screens made a prior offer for sale or completed the sale. Thus, the Purchase Order does not prove that a sale of the Centerpipe took place greater than one year prior to the ‘072 patent’s application. 35 U.S.C. § 102. Thus, it fails to confirm the reference constitutes prior art.

Finally, J&L cites the New Wave Article as prior art invalidating claims 2, 7, 15, 31, and 32 by anticipation in combination with other references. AFT asserts that J&L cannot prove the printed publication requirement of 35 U.S.C. § 102. J&L, in response, points to the date, 1984 and publisher, TAPPI, that are marked on the Article, and to the pagination indicating the Article was part of a larger publication. AFT’s expert, Dr. Gary Scott, a long-term member of TAPPI who now serves on its Board of Directors, though unfamiliar with this particular article, verified it is in the general form that is used in TAPPI proceedings where such papers are delivered. Supplemental Cross Decl., Ex. B, Scott Dep. (Dkt. No 64-4). Scott further noted that such articles are publically accessible to those interested in the art through a literature search. J&L thus sufficiently meets its burden in showing that the New Wave Article meets the “publically accessible” requirement at the heart of the printed publication demand of 35 U.S.C. § 102. See Bruckelmeyer v. Ground Heaters, Inc., 445 F.3d 1374, 1378 (Fed. Cir. 2006) (citing In re Wyer, 655 F.2d at 226); see also Massachusetts Institute of Tech. v. A.B. Fortia, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (oral presentation of a paper in an open forum sufficiently met publication requirement). AFT fails to rebut this showing. Accordingly, the Court shall withhold granting summary judgment as to the validity of claims 2, 7, 15, 31, and 32, as these may be anticipated by the New Wave Article.

2. Obviousness

35 U.S.C. § 103 prohibits the issuance of patents where “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” Patents issued in violation of this rule are invalid. While “the ultimate question of patent validity is one of law,” validity ultimately rests on factual inquiries as to (1) the scope and content of prior art; (2) differences between that prior art and the claimed invention; (3) the level of ordinary skill in the pertinent art; and (4) any other indicia of obviousness or non-obviousness. Graham v. John Deere Co. of Kansas City, 381 U.S. 1 (1966); KSR, 550 U.S. 398 (2007). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” KSR, 550 U.S. at 416. J&L alleges that claims 10, 2-5, 15, 24-25, 31, 32-36 of the ‘940 patent are invalid under this standard. J&L Summ. J. Mem. 9-11, 13-14.

Any challenge to a patent’s validity “on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (citations omitted). An expert, however, need not elaborate extensively as to why it would be obvious for one of ordinary skill in the art to combine elements from various sources, as such combination may simply result from “common sense.” KSR, 550 U.S. at 418. Courts must not conflate “common sense” with what appears obvious in hindsight and should “resist the temptation to read into prior art the teachings of the invention in issue.” Graham, 383 U.S. at 36 (citing Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co., 332 F.2d 406, 412 (1964)).

Thus, “some kind of motivation must be shown from some source, so that the jury can understand why a person of ordinary skill would have thought of either combining two or more references or modifying one to achieve the patented method.” Innogenetics, 512 F.3d 363, 1374 (Fed. Cir. 2008) (internal quotation omitted).

J&L argues that claim 10 is invalid because the Johnson Screens Brochure discloses all the structural components of that claim with the exception of slots having a “contoured portion,” and that this missing element is supplied by the Yoshida reference; it asserts that combining these sources would be obvious. J&L Summ. J. Mem. at 9-10. As discussed in the previous section, however, the Johnson Screens Brochure does not exhibit a “screening medium” “in engagement with” a “backing plate.” Therefore, J&L invalidity argument fails as to this claim, as well as to claims 2-5, 15, 24-25, 31-36, each of which depends on either claim 1 or 10, which recite a “screening medium” “in engagement with” a “backing plate.” Accordingly, as a matter of law, the Johnson Screens Brochure and Yoshida references, in combination, do not invalidate the ‘940 patent as obvious.

J&L offers the PIMA article as evidence of prior art that invalidates as obvious claims 1-20, 23-36, 37-39. AFT contends that the PIMA Article, alone, or in combination with other cited references, does not teach a “backing plate.” In support of this claim, it cites to J&L’s corporate representative, Mark Lutz’ statement that the PIMA Article does not disclose a backing plate similar to the AFT ‘940 patent.” Hutton Decl., Ex. S, Lutz Dep. (Dkt. No. 51-26) at 43:5-45:3 (stating that the supporting frame is not a plate but “fabrication made up of rings and vertical plate members”). AFT also notes that Richard Venditti, J&L’s other corporate representative, refused to call the structure shown in the PIMA Article a “backing plate,” referring to it only as a “supporting frame.”

Hutton Decl., Ex. U, Venditti Dep. (Dkt. No. 51-28) at 79.

The deposition testimony cited by AFT was given prior to this Court’s construction of the term “backing plate.” AFT’s argument solely relies on testimony that was based on an understanding that the plate element of a “backing plate” necessarily started out as a flat piece of metal. See Hutton Decl., Ex. U, Venditti Dep. (Dkt. No. 51-28) at 79. That requirement was disposed of in claim construction. Both Lutz and Venditti stated that the PIMA Article disclosed a supporting frame for the screen; that frame is made of metal and shows openings. AFT’s reliance on their pre-claim construction testimony is insufficient to hold that, as a matter of law, the PIMA Article fails to disclose a “backing plate.” Accordingly, summary judgment is in favor of AFT is denied as to the validity of claims 1-20, 23-36, 37-39.

3. 35 U.S.C. § 112

J&L asserts that claim 25 is invalid for failure to comply with 35 U.S.C. § 112. J&L Summ. J. Mem. at 15. That section requires that a dependent claim “contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.” 35 U.S.C. § 112, ¶ 4. The same section allows “an element in a claim for a combination [to] be expressed as a means . . . for performing a specified function without the recital of structure, material . . . and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6.

Claim 2 depends upon claim 1 and additionally recites a “means for releasably connecting.” The Court has previously identified the “means” that this means-plus-function claim includes. Supra sec. II.C.7(e). Claim 25 recites “[a] screen cylinder according to claim 2, wherein said means for releasably connecting includes a shrink-fit.” Because the Court has already determined that a

“shrink-fit” is not a structure, see supra sec. II.C.7(b)(ii), claim 25 is a dependent claim that does not recite an additional structure or “specify a further limitation of the subject matter claimed.” 35 U.S.C. § 112. It is, therefore, invalid as a matter of law. See Pfizer, Inc. v. Ranbaxy Labs., Ltd., 457 F.3d 1284, 1292 (Fed. Cir. 2006).

D. Willfulness

AFT alleges that J&L has willfully infringed upon the ‘072 patent and ‘940 patent. Compl. ¶ 19. It seeks relief partially in the form of treble damages pursuant to 35 U.S.C. § 284. Id. ¶ (e). Section 284 provides, in relevant part, that “the court shall award the claimant damages adequate to compensate for the infringement [T]he court may increase the damages up to three times the amount found or assessed.” 35 U.S.C. § 284. Enhanced damages are available, however, only upon a showing of “willful infringement” or “bad faith.” Beatrice Foods Co. v. New England Printing & Lithographing Co., 923 F.2d 1576, 1578 (Fed. Cir. 1991) (citations omitted).

The Federal Circuit has held that “to establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.” In re Seagate Tech, LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (citing Safeco Ins. Co. of Am. v. Burr, 551 U.S. 47, 68-69 (2007)). Furthermore, “the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.” Id. Importantly, the Federal Circuit has noted that:

when a complaint is filed, a patentee must have a good faith basis for alleging willful infringement. So a willfulness claim asserted in the original complaint must necessarily be grounded exclusively in the accused infringer’s pre-filing conduct. By contrast, when an accused infringer’s post-filing conduct is reckless, a patentee can move for a preliminary injunction, which generally provides an adequate remedy for combating post-filing willful infringement.

Id. at 1374 (internal citations omitted).

J&L seeks summary judgment dismissing AFT's claim of willful infringement. Summ. J. Mem. at 20-24. It asserts that its actions were objectively reasonable, i.e. not reckless, as evidenced by: 1) the intrinsic evidence of the '072 and '940 patents; 2) a series of correspondences between J&L and CAE ScreenPlates, Inc. and AFT demonstrating its "firm beliefs" that the '072 patent was invalid and that it did not use the same means for releasably connecting described in AFT's patent, see Wasikoski Decl., Ex. H (Dkt. No. 50-11); and 3) the fact that any infringement found that is traceable to the new claims and prosecution history of the '940 patent could not be willful as it involved post-litigation conduct.

AFT correctly notes that the correspondence J&L cites in support of its argument is inadmissible hearsay, which may not be considered on motion for summary judgment.²² See FED. R. EVID. 801(c); Beyah v. Coughlin, 789 F.2d 986, 989 (2d Cir. 1986); Spadaro v. McKeon, 693 F. Supp. 2d 183, 188-89 (N.D.N.Y. 2010). Nevertheless, J&L's other bases for its non-recklessness establish that, as a matter of law, it did not willfully infringe upon AFT's patents.

First, the language of the '072 patent leaves significant doubt as to the patent's validity. J&L's compelling non-infringement and invalidity arguments and prior art challenges testify to this fact. So to does the Patent Examiner's rejection of the reissue application based on it being "structurally indistinguishable" from the Gillespie. Dkt. No. 33-17 at 5. In the face of the credible arguments made by J&L and the prosecution history of the '940 patent, AFT cannot meet its burden

²² The "state of mind" exception to hearsay inadmissability explicitly excludes "a statement of . . . belief to prove the fact . . . believed." FED. R. EVID. 803(3). J&L offers the correspondence as proof of the fact that it firmly believed that it was not infringing. Reply Mem. in Supp. Summ. J. Mot. (Dkt. No. 86) at 9. Hence, the correspondence is not covered by the exception.

of showing by clear and convincing evidence that J&L's potential infringement was objectively reckless.

Second, the bases upon which the Court has found that J&L's V-Max may infringe AFT's patents result from the construction given to claim terms which were affected by the prosecution history of the '940 patent, and/or relate to changes and additions made to the '072 patent in that reissue. See generally supra, sec. II.. As the Seagate court noted, "a willfulness claim asserted in the original complaint must necessarily be grounded exclusively in the accused infringer's pre-filing conduct." 497 F.3d at 1374. For post-filing conduct, a preliminary injunction is generally the proper remedy. Id. AFT filed its Complaint prior to the reissue of the '940 patent. That reissue contains 16 new claims (claims 24-39) not present in the '072 patent. J&L could not have willfully infringed upon these claims, which did not issue until after this suit was filed. Similarly, because the scope of the patent and the meaning of such key terms as "screening medium," which are present in the '072 only became apparent and/or took on new meaning during the prosecution of the reissue through AFT's response to the Examiner's denial of that reissue in the face of the Gillespie, J&L could not have been acting "despite an objectively high likelihood that its actions constituted infringement of a valid patent." Seagate, 497 F.3d at 1371. In the face of such evidence, AFT's ability to produce clear and convincing evidence to the contrary is foreclosed. Summary judgment as to the non-willfulness of any infringement by J&L is, therefore, appropriate.

IV. CONCLUSION

Based on the foregoing discussion, it is hereby

ORDERED, that Defendant's Motion for the construction of claim terms (Dkt. No. 45) is

GRANTED in part and DENIED in part consistent with this opinion; and it is further

ORDERED, that Defendant's Motion for summary judgment (Dkt. No. 50) is **GRANTED in part and DENIED in part**. Defendant's Motion for summary judgment (Dkt. No. 50) is **GRANTED** as to Defendant's non-infringement of claims 3, 5, 33, 35 and as to the invalidity of claim 25. Defendant's Motion for summary judgment (Dkt. No. 50) is **DENIED** as to Defendant's non-infringement of all other claims and the invalidity of all other claims. Defendant's Motion for summary judgment (Dkt. No. 50) is further **GRANTED** as to the issue of willful infringement, and AFT's claim for willful infringement is **DISMISSED** as to all claims; and it is further

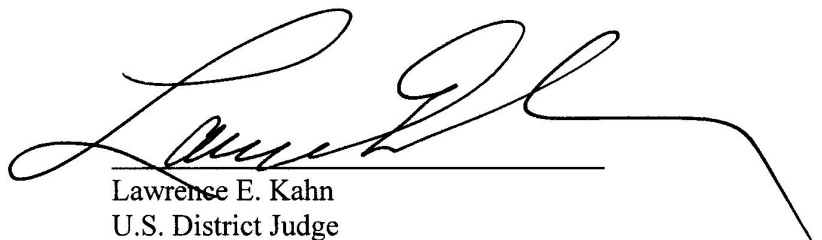
ORDERED, that Plaintiff's Motion for summary judgment on the issue of infringement (Dkt. No. 33) is **DENIED**; and it is further

ORDERED, that Plaintiff's Motion for summary judgment on the issue of validity (Dkt. No. 51) is **DENIED** consistent with this opinion; and it is further

ORDERED, that the Clerk serve a copy of this Order on the parties.

IT IS SO ORDERED.

DATED: September 13, 2010
Albany, New York



Lawrence E. Kahn
U.S. District Judge